

Work Order ID 46411-2 *split*

June 26, 2009 11:51:08 AM



Page 1

Item ID: D6101-005

Accept



Setup Start



Revision ID: A

Item Name: Saddle Billet

Stop



Start Date: 15/07/2009 Start Qty: *300.00* *50*



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: *300.00*



Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D6101

Rev A

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: *8393* a) Description: Alluminum billet b) 5.00" x 8.250" x 2.50" thick c) Tolerance on all dimensions are +0.030"/-0.000" d) Grain direction along 5.00" length e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

0209/03/13 *50*

9/3/13

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure material certification is attached

250

09/5/12 50

Work Order ID 46411

June 26, 2009 11:51:08 AM



Page 2

Item ID: D6101-005

Accept



Setup Start



Revision ID: A

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Start Date: 15/07/2009 Start Qty: 300.00



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Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

QC6- Inspect dimensions to drawing

0.00



QC

Quality Control

Memo

Ensure Material certification comply to Dwg D6101

0.00

2> 807/07/24

(18) f

count

130

Identify as per dwg & Stock Location: _____

0.00



Packaging

Packaging

Memo

0.00

CL 09/09/25 50

140

QC21- Final Inspection - Work Order Release

0.00



QC

Quality Control

Memo

0.00

09/09/28 f

MF 09-09-26

Picklist-Print

June 26, 2009 11:30:12 AM

Page 1

Work Order ID: 46411

Parent Item: D6101-005RevA

Parent Item Name: Saddle Billet

Comments:

Start Date: 15/07/2009

Required Date: 03/08/2009

Start Qty: 300.00

Required Qty: 300.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D6101-005PRevA		Purchased	No			110	Each	0.0000	300.0000			



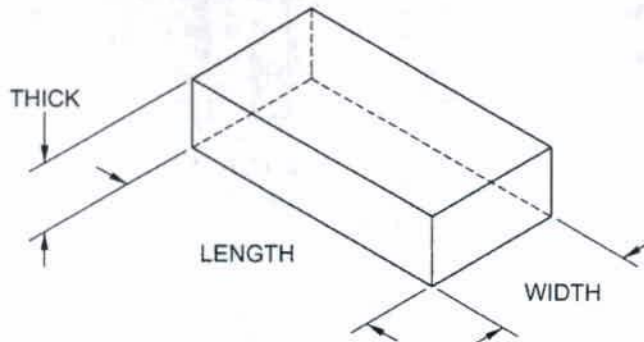
7075-T7351 8.25X5.0X2.5



06/26/24 (50)

SPECIFICATION CONTROL DRAWING

REFERENCE ONLY



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

△ ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

△ B

RELEASED
09/07/15/W

46411

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Pack Slip No:4066359

Ship From: Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 24-SEP-09	F.O.B. ORIGIN	Freight Terms Prepaid	Carrier LOCAL_FLEET	BOL No 69346-5	Delivery No 4066359		

Shipment Details			Final Destination Branch - MON			
Order No 273463	Line No 2	Item No 6879.MO	Description 2.5000.PL.7075.T7351.ALUMINUM.48.5000.144.5000 CUT 2SIDED TO 8.25 IN (+ .0310/- .0000 IN) X 5 IN (+ .0310/- .0000 IN)			
Purchase Order No 8393		Part Number YOUR ITEM NUMBER: GRAIN TO RUN ALONG 5"	Ordered Qty 50 PCS	Invoice Qty 50 PCS	Backorder Qty	
Details						
Mill	Heat Number 422818A5	Mech Id	PCS 50	Width (IN)	Length (IN)	Shipped Qty (LBS) 520.88

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

This material has been received and inspected by:	Date:
---	-------

HT # 422818A5 5 PCS

HT # 407241 45 PCS.

S
9/10/24

SHIP TO:

CASTLE METALS
C/O CUTTER PRECISION METALS
1208 NO. 4TH AVE
KENT, WA 98032

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4128700

SOLD TO:

AM CASTLE & CO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

CUSTOMER PO NUMBER: 45-24888		WORK PACKAGE:	CUSTOMER PART NUMBER: 6879 A97075-60			SHIP RUN/LOAD ID: 101277/8	GOV'T CONTRACT NUMBER:
KAISER ORDER NO: 1066888	LINE ITEM: 1	SHIP DATE: 5-MAY-2008	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE	
WEIGHT SHIPPED: 3620 LB	QUANTITY: 2 PCS EST.	B/L NUMBER: 2017643		GAUGE: 2.5000 IN	WIDTH: 48.500 IN	LENGTH: 144.500 IN	

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev07
BSS 7055/RevA
DPS 4.713/RevAH
GSS16100/RevG

AMS-QQ-A-250/12
ASTM B 594/Rev06
CMMP 025/RevR
EAC MS1011/RevE
MMS 159/RevN

AMS-STD-2154
BAC 5439/RevH
CSTI 006/RevC
GAMPS 9101/RevB
PS 21211/RevK

Test Code: 4297

Test Results

Lot: 422818A5 Cast 161

Drop 24

Ingot 1

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.2 : 71.0 (484 : 490)	58.9 : 60.0 (406 : 414)	10.6 : 10.7

(ASTM E1004)

Conductivity %IACS :	40.7 Min	41.7 Max
(MS/M) :	23.6 Min	24.2 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.20	1.4	0.05	2.4	0.20	5.6	0.03	0.01	0.01	TOT 0.03

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder


**KAISER
ALUMINUM**Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586**CERTIFIED TEST REPORT**Serial Number
4128700**TEST NOTES**

Metal represented by this test report was immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

CASTLE METALS - KENT	
DATE REC'D <u>6-7-08</u>	CUST. _____
REC'D FROM <u>Kaiser</u>	CUST. P.O. _____
APPROVED BY <u>AM</u>	AMC S/O _____
TR # <u>422818A15</u>	
WE HEREBY CERTIFY THAT THESE ARE CORRECT COPIES OF REPORTS NOW ON FILE AT A.M. CASTLE & CO. RY: <u>IAC: 4879</u>	

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE U.S.A OR CANADA AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

CERTIFIED INSPECTION REPORT

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Malcolm Murphy

Malcolm Murphy
Director of Manufacturing Davenport Works

Kenton P. Young

Kenton P. Young
Quality Assurance Manager

996525 0
Ship Date B.L. No. Invoice No. Alcoa No. Item Page 1
2009-01-23 3313153 00000 1000053649-1
P.O. No./Govt Contract No. Customer Alcoa Item Mfg Order
23-14738 CASTLE A M G041005634R08 DS-53649-01-1

Ship To: A M CASTLE & COMPANY
3050 SOUTH HYDRAULIC
WICHITA 67216 KS

Item Description

2.5 IN TK (+.0750 -.0750) X 48.5 IN W (+.3125 -
0.000) X 144.5 IN LN (+.5 -.0) CAT D 164168 (N) A/T 7075-
T7351 RECTANGLE MILL FINISH, US1 3MM DEAD ZONE REQ'D BOTH SIDES,
SAMED IAC 6879 EXC MRK A97075-60 REV 22 AMS-QQ-A-250/12 IS 2007 AMS-
STD-2154 EXC MRK AMS4078 REV G EXC MRK ASTM209
REV 07 ASTM594 REV 06 BSS7055 REV A
EXC MRK MMS159 REV N PS21211 REV K ((MARKED))
KRAFT PAPER INTERLEAVED
MAX GROSS SKID NGT: 4500 LB QUAN TOL +/-
25 % US1 CL A 3 MM CQR 0137890 REV 17 CUST REQ 09-01-
23 *** W/E 09-01-31 ***

Num	Package Ticket	Lot	Weight	Quantity	UOM	Pc Id/Serl
1	709623	407241 ✓	3582	2	PC	:

Notes for CQR: 0137890.17

PRODUCT PRODUCED TO THE REQUIREMENTS OF ASTM2375 ALSO MEET THE REQUIREMENTS OF AMS-STD-2154. PRODUCT PRODUCED TO THE REQUIREMENTS OF AMS-STD-2154 ALSO MEET THE REQUIREMENTS OF ASTM2375.
THIS MATERIAL HAS BEEN ULTRASONICALLY INSPECTED FULLY IMMEDIATELY - TYPE I.
PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ-A-250/12 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/12F. PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/12 F ALSO MEETS THE REQUIREMENTS OF AMS-QQ-A-250/12.
Exception to Spec A97075-60 : Revsn: 22 Issue: Letter dated 2007-05-14 from AHERN, DENNIS T to PLATTER, BARB

CQR: 0137890.17 -Specification Limits

Temp	Dir	UTS	TYS	EL4D
		KSI	KSI	PCT
T7351	Long Transv.	Max	63.9	
		Min	66.0	52.0
T7351	Elec. Cond. (EC)	% MIN	38.0	PCT

Chemical Composition	SI	FE	CU	MN	MG	CR	ZN	TI	Other Each	Other Total	Aluminum
Alloy 7075	Max	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.15
	Min			1.2		2.1	0.18	5.1			REMAIN

CASTLE METALWORKS

DATE REC'D 1-26-09
REC'D FROM 51666
APPROVED BY [Signature]

T-369 P003/032 F-181

3165223453

01-27-'09 10:29 FROM a m castle metals

01-27-'09 10:29 FROM-a m castle metals 3165223453 T-369 P004/032 F-181

CERTIFIED INSPECTION REPORT

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS
Ship From: RIVERDALE, IA.

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Part:

Malcolm Murphy
Director of Manufacturing Davenport Works

Kenich P. Young
Quality Assurance Manager

996525	0				
Ship Date	B.L. No.	Invoice No.	Alcoa No.	Item	Page 2
2009-01-23	3313153	00000	1000053649-1		
P.O. No./Govt Contract No.	Customer	Alcoa Item	Mfg Order		
23-14738	CASTLE A M	G041005634R08	DS-53649-01-1		

CQR: 0137890.17 -Specification Limits (cont.)
Lot: 407241 - Mechanical, Physical, Metallography, Quantometer Results

Temp	Dir	No->	UTS	TYS	BL4D
		Test	KSI	KSI	PCT
T7351	Long Transv.	3	70	58.4	10.3
			69.8	58.2	10.4
			70	58.4	10.4

T7351 Slect Cond %IACS 40.3 40.4 40.5 PCT

Cast Number	Chemical - OES	SI	FE	CU	MN	MG	CR	ZN	TI
H9127043	Actuals	0.06	0.29	1.6	0.02	2.5	0.19	5.7	0.02

This material was melted in the United States or a Qualifying Country [BSF DFARS 225.872.1(a)]; it was manufactured in the United States